



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/749,150

12/30/2003

Marius Filtvedt

49281.1.2

3851

22859

7590

03/03/2010

INTELLECTUAL PROPERTY GROUP

FREDRIKSON & BYRON, P.A.

200 SOUTH SIXTH STREET, SUITE 4000

MINNEAPOLIS, MN 55402

EXAMINER

BROWN, MICHAEL A

ART UNIT

PAPER NUMBER

3772

MAIL DATE

DELIVERY MODE

03/03/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/749,150	Applicant(s) FILTVEDT ET AL.	
	Examiner MICHAEL BROWN	Art Unit 3772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,9,40,41,48-51,70,72,76,77 and 83-90 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,9,40,41,48-51,70,72,76,77 and 83-90 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/24/09</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

The Affidavits filed under 37 CFR 1.132 on January 14, 2008 are insufficient to overcome the rejection of all claims set forth in this rejection because while applicant has claimed that negative pressure is generated between 5 and 15 seconds and released for between 2 and 15 seconds, note that: MacLeod '613, teaches that the pressure can be synchronized to the heartbeat or can be applied less or more frequently and in regular multiples of a heartbeat, for example during every second or third heartbeat or the pressure can be applied irregularly with respect to the heartbeat (col. 5, lines 9-20). Consequently the device disclosed by MacLeod is capable of providing the recited pressures. A second note of importance is the heartbeat of various people will vary about every two seconds or more depending on the state of an individual when his or her heartbeat is taken. Note: Norton '839 teaches a housing used to provide a negative pressure (col. 9, lines 63-68 and col. 10, lines 1-21). A prima facie case of obviousness is presented when the claimed ranges and the prior art ranges don't overlap but are close enough that one skill in the art would have expected them to have the same properties.

Note: The computer program with instructions isn't a device so it lacks patentable weight. This rejection was made a non-final in order to give applicant a chance to respond to this comment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 9, 70, 72, 76-77 and 83-84 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over MacLeod '613.

MacLeod discloses a device capable of applying a pulsating pressure to a local region of the body, comprising a pressure chamber 10, into which a limb of the body can be placed to seal it from external conditions, the limb can be immersed in a liquid in the pressure chamber, an element 36, capable of generating a pulse of pressure within the chamber that can be transmitted to the limb directly via the liquid. MacLeod also teaches that the pressure can be synchronized to the heartbeat or can be applied less or more frequently and in regular multiples of a heartbeat (i.e., during every second or third heartbeat or the pressure can be applied irregularly with respect to the heartbeat, col. 5, lines 9-20). Therefore MacLeod is capable of providing the recited pressures.

Note: The rate of a heartbeat is different from one person to another. While the rate of the heartbeat of one person might be about every five seconds or more or less the heartbeat of another person might be even greater or lesser depending on the person's state of relaxation (sleeping, resting). MacLeod also discloses a cylindrical housing 10, having an opening for receiving the limb and the opening is sealed around the user's arm, an inlet 31, and outlet 42 for introducing and discharging the liquid into and out of

Art Unit: 3772

the chamber, a liquid flow transmission means 26, a heat exchanger 24, the element is capable of releasing pressure every seven seconds, generating negative pressure for ten seconds and the liquid can be water. It would have been obvious to one having ordinary skill in the art at the time that the invention was made that the teaching of MacLeod provides that the pressure can be applied less frequently in regular multiples of a heartbeat (i.e., in about at least more than one second or longer), the exact optimum time intervals can be defined by obvious experiments and observations to obtain optimum results, which are well within the scope of one of ordinary skill in the art and which don't provide any unexpected results and therefore lack patentability over the prior art. It is within the scope of one of ordinary skill in the art to use the heat exchanger tubes in a heat exchanger unit. The device disclosed by MacLeod is capable of maintaining the liquid at the temperatures recited in claims 83-84.

Claims 40-41, 48-51 and 85-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLeod '613 in view of Grahn '438, along with Norton '839.

MacLeod discloses a device for applying pulsating pressure. However, MacLeod doesn't disclose a vacuum pump or a heat exchanger wherein negative pressure is between 20 mmHg to 85 mmHg. Grahn teaches a vacuum pump 32 and a heat exchanger 44, wherein negative pressure can be applied between negative 20 mmHg to 85 mmHg. Norton teaches a device with a vacuum pump 85, that provides a pressure range from negative 50 mmHg to positive 25 mmHg. It would have been obvious to one having ordinary skill in the art at the time that the invention was made that the heat exchanger as taught by Grahn could be substituted for the heat exchanger disclosed by

Art Unit: 3772

MacLeod in order to heat the circulated fluid and to exhaust the air inside of the chamber at a specific negative pressure. The method of treating hyperthermia recited in claims 85-90 are within the scope of MacLeod in view of Grahn and Norton. The liquid in the housing could be maintained at the temperatures recited in claims 40-41.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL BROWN whose telephone number is (571)272-4972. The examiner can normally be reached on 5:30 am-4:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on 571-272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/749,150
Art Unit: 3772

Page 6

/Michael Brown/
Primary Examiner, Art Unit 3772